

479584 TO 479593-continued

several plants. Cultivated. Wild. Seed.

479593. Japan. US National Arboretum. 51424. Hokkaido (Federal) Forest Breeding Station, Hokkaido. Sent to US Arboretum by M. Kawase. Collected in Ashibetsu-shi. Seed.

479594 TO 479595. *Sorbus matsumurana* (Makino) Koehne (Rosaceae).

From Japan. Collected by Kawase, M.; Nielsen, D.; Meyer, F.; March, S.; Ohio Agricultural Research & Development Center; US National Arboretum; Wooster, Ohio; Washington, D.C.

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479594. JH-95-82. Japan. US National Arboretum. 51117. Collected September 19, 1982. S of hwy 344, E of pass toward Lake Rausu, Rausu-cho, Menashi-gun, Hokkaido. 675m. Lat. 44 deg. 03' N, Long. 145 deg. 10' E. Snow cover 1.5m per annum. Minimum temperature -20C. Shrub deciduous, erect, 2-2.5m tall, multistemmed from base. Leaves dark green above, glaucous beneath; rachis reddish. Fruit bright red, nearly globose. Growing in open areas and mixed woodland with *Betula*, *Acer*, *Pinus* & *Sasa*. Seed collected from several plants. Wild. Seed.

479595. JH-210-82. Japan. US National Arboretum. 51233. Collected September 29, 1982. South slope of Mt Dairoku, Furano-shi, Hokkaido. 1330m. Lat. 43 deg. 36' N, Long. 144 deg. 26' E. Snow cover 2.5m per annum. Minimum temperature -30C. Shrub deciduous, 1.8-2.5m tall, multitrunked from base, of low stature. Fruit red, lustrous. Growing in woodland on steep mountain slope. Seed collected from several plants. Wild. Seed.

479596 TO 479597. *Sorbus sambucifolia* (Cham. & Schltdl.) Roem. (Rosaceae).

From Japan. Collected by Kawase, M.; Nielsen, D.; Meyer, F.; March, S.; Ohio Agricultural Research & Development Center; US National Arboretum; Wooster, Ohio; Washington, D.C.

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479596. JH-118-82. Japan. US National Arboretum. 51146. Collected September 22, 1982. Hichirippu, Hamanaka-machi, Akkeshi-gun, Hokkaido. Lat. 43 deg. 04' N, Long. 145 deg. 05' E. Snow 40cm, deepest 1.3m. Minimum temperature -20C. Shrub deciduous, 1.2-1.5m tall, multistemmed from base. Stems gray. Buds purplish, shiny. Leaflets lustrous above, yellowish green beneath. Fruit globose, deep red, lustrous. Seed collected from several plants transplanted